

Specifications

Photo is representative

Eaton 276971

Eaton Moeller® series DILMP Contactor, 4 pole, 22 A, 380 V 50 Hz, 440 V 60 Hz, AC operation

General specifications

| | |
|-----------------------------|--|
| PRODUCT NAME | Eaton Moeller® series DILMP 4-pole contactor |
| CATALOG NUMBER | 276971 |
| MODEL CODE | DILMP20(380V50HZ,440V60HZ) |
| EAN | 4015082769710 |
| PRODUCT LENGTH/DEPTH | 75 mm |
| PRODUCT HEIGHT | 68 mm |
| PRODUCT WIDTH | 45 mm |
| PRODUCT WEIGHT | 0.236 kg |
| CERTIFICATIONS | IEC/EN 60947-4-1 VDE 0660 CSA-C22.2 No. 60947-4-1-14 UL CE CSA File No.: 012528 CSA UL 60947-4-1 IEC/EN 60947 UL File No.: E29096 UL Category Control No.: NLDX CSA Class No.: 2411-03, 3211-04 |
| CATALOG NOTES | Contacts according to EN 50012 |
| GLOBAL CATALOG | 276971 |

Product specifications

| | |
|---|--|
| NUMBER OF POLES | Four-pole |
| 10.10 TEMPERATURE RISE | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 SHORT-CIRCUIT RATING | Is the panel builder's responsibility. The specifications for the switchgear must be observed. |
| 10.12 ELECTROMAGNETIC COMPATIBILITY | Is the panel builder's responsibility. The specifications for the switchgear must be observed. |
| 10.13 MECHANICAL FUNCTION | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed. |
| 10.2.2 CORROSION RESISTANCE | Meets the product standard's requirements. |
| 10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES | Meets the product standard's requirements. |
| 10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT | Meets the product standard's requirements. |
| 10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS | Meets the product standard's requirements. |
| 10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION | Meets the product standard's requirements. |
| 10.2.5 LIFTING | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.6 MECHANICAL IMPACT | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.7 INSCRIPTIONS | Meets the product standard's requirements. |
| 10.3 DEGREE OF PROTECTION OF | Does not apply, since the entire switchgear needs to |

Resources

CATALOGS

[SmartWire-DT Catalog](#)

[Product Range Catalog Switching and protecting motors](#)

[eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf](#)

DECLARATIONS OF CONFORMITY

[DA-DC-00004810.pdf](#)

[DA-DC-00004792.pdf](#)

[eaton-contactors-dilmp-dimensions-006.eps](#)

[eaton-contactors-dilm-dimensions-013.eps](#)

[eaton-contactors-mounting-dilm-dimensions.eps](#)

DRAWINGS

[eaton-contactors-mounting-dilm-dimensions-002.eps](#)

[eaton-contactors-characteristic-curve-2110dia-3.eps](#)

[eaton-contactors-dilm-3d-drawing-007.eps](#)

ECAD MODEL

[ETN.276971.edz](#)

INSTALLATION INSTRUCTIONS

[eaton-contactors-dila-dilm7-15-dilmp20-il03407013z.pdf](#)

INSTALLATION VIDEOS

[WIN-WIN with push-in technology](#)

MCAD MODEL

[DA-CD-dil_m7_15](#)

[DA-CS-dil_m7_15](#)

WIRING DIAGRAMS

[eaton-contactors-contact-dilem-wiring-diagram.eps](#)

| | |
|---|---|
| ASSEMBLIES | be evaluated. |
| 10.4 CLEARANCES AND CREEPAGE DISTANCES | Meets the product standard's requirements. |
| 10.5 PROTECTION AGAINST ELECTRIC SHOCK | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS | Is the panel builder's responsibility. |
| 10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS | Is the panel builder's responsibility. |
| 10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH | Is the panel builder's responsibility. |
| 10.9.3 IMPULSE WITHSTAND VOLTAGE | Is the panel builder's responsibility. |
| 10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL | Is the panel builder's responsibility. |
| OPERATING FREQUENCY | 5000 mechanical Operations/h (AC operated) 5000 mechanical Operations/h (DC operated) |
| POLLUTION DEGREE | 3 |
| CLIMATIC PROOFING | Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78 |
| CONNECTION TO SMARTWIRE-DT | No |
| RATED IMPULSE WITHSTAND VOLTAGE (UIMP) | 8000 V AC |
| UTILIZATION CATEGORY | AC-1: Non-inductive or slightly inductive loads, resistance furnaces AC-3: Normal AC induction motors: starting, switch off during running |
| CONNECTION | Screw terminals |
| AMBIENT OPERATING TEMPERATURE - MAX | 60 °C |
| AMBIENT OPERATING TEMPERATURE - MIN | -25 °C |

| | |
|---|--|
| AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX | 40 °C |
| AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN | 25 °C |
| AMBIENT STORAGE TEMPERATURE - MAX | 80 °C |
| AMBIENT STORAGE TEMPERATURE - MIN | 40 °C |
| CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED) | 54 A |
| CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED) | 18 A |
| CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN) | 20.5 A |
| CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN) | 60 A |
| EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID | 3 W |
| HEAT DISSIPATION CAPACITY PDISS | 0 W |
| HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID | 1 W |
| APPLICATION | Contactors for 4 pole electric consumers |
| PRODUCT CATEGORY | Contactors |
| PROTECTION | Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274) |
| ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT | Screw connection |
| SCREWDRIVER SIZE | 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver 2, Terminal screw, Pozidriv screwdriver |
| VOLTAGE TYPE | AC |
| DEGREE OF PROTECTION | IP20 |

| | |
|--|---|
| NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS) | 0 |
| NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS) | 0 |
| NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT | 0 |
| NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT) | 4 |
| RATED BREAKING CAPACITY AT 220/230 V | 120 A |
| RATED BREAKING CAPACITY AT 380/400 V | 120 A |
| RATED BREAKING CAPACITY AT 500 V | 100 A |
| RATED BREAKING CAPACITY AT 660/690 V | 70 A |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX | 380 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN | 380 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX | 440 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN | 440 V |
| DROP-OUT VOLTAGE | AC operated: $0.6 - 0.4 \times U_c$ UC, AC operated |
| OVERVOLTAGE CATEGORY | III |
| DUTY FACTOR | 100 % |
| LIFESPAN, MECHANICAL | 10,000,000 Operations (DC operated) 10,000,000 Operations (AC operated) |
| PICK-UP VOLTAGE | $0.8 - 1.1 \text{ V AC/DC} \times U_s$ $0.8 - 1.1 \text{ V AC} \times U_c$ |
| POWER CONSUMPTION, PICK-UP, 50 HZ | 24 VA, Dual-frequency coil in a cold state and $1.0 \times U_s$ |
| SAFE ISOLATION | 400 V AC, Between the contacts, According to EN 61140 400 V AC, Between coil |

| | |
|--|---|
| | and contacts, According to EN 61140 |
| POWER CONSUMPTION, PICK-UP, 60 HZ | 19 W, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 24 VA, Dual-frequency coil in a cold state and 1.0 x Us |
| RESIDUAL CURRENT | 1 mA (with actuation of A1 - A2 by the electronics with "0" signal) |
| SCREW SIZE | M3.5, Terminal screw |
| POWER CONSUMPTION, SEALING, 50 HZ | 1.4 W, Dual-frequency coil in a cold state and 1.0 x Us |
| POWER CONSUMPTION, SEALING, 60 HZ | 4 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 1.4 W, Dual-frequency coil in a cold state and 1.0 x Us |
| TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) | 1 x (0.75 - 2.5) mm ² 2 x (0.75 - 2.5) mm ² |
| SHOCK RESISTANCE | 5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 10 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms |
| TERMINAL CAPACITY (SOLID) | 1 x (0.75 - 4) mm ² 2 x (0.75 - 2.5) mm ² |
| TERMINAL CAPACITY (SOLID/STRANDED AWG) | 18 - 14 |
| SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE) | 20 A, Maximum motor rating (UL/CSA) |
| TIGHTENING TORQUE | 1.2 Nm, Screw terminals |
| RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX | 0 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN | 0 V |
| RATED INSULATION VOLTAGE (UI) | 690 V |
| RATED MAKING | 144 A |

| | |
|--|-------|
| CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947) | |
| RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V | 22 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V | 12 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V | 12 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V | 12 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V | 10 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V | 7 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V | 10 A |
| RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V | 22 A |
| RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V | 6 A |
| RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V | 22 A |
| RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) | 22 A |
| RATED OPERATIONAL POWER AT AC-1, 220/230 V, 50 HZ | 8 kW |
| RATED OPERATIONAL POWER AT AC-1, 240 V, 50 HZ | 9 kW |
| RATED OPERATIONAL POWER AT AC-1, 380/400 V, 50 HZ | 14 kW |
| RATED OPERATIONAL POWER AT AC-1, 415 V, 50 HZ | 15 kW |
| RATED OPERATIONAL POWER AT AC-1, 440 V, 50 | 16 kW |

| | |
|---|--------|
| HZ | |
| RATED OPERATIONAL POWER AT AC-1, 500 V, 50 HZ | 18 kW |
| RATED OPERATIONAL POWER AT AC-1, 690 V, 50 HZ | 24 kW |
| RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ | 4 kW |
| RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ | 5.5 kW |
| RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ | 7 kW |
| RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ | 4.5 kW |
| RATED OPERATIONAL POWER (NEMA) | 0 kW |
| RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX | 690 V |
| RESISTANCE PER POLE | 2.5 mΩ |
| STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS | 1.4 W |
| STRIPPING LENGTH (CONTROL CIRCUIT CABLE) | 10 mm |
| STRIPPING LENGTH (MAIN CABLE) | 10 mm |
| SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX | 21 ms |
| SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN | 15 ms |
| SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX | 18 ms |
| SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN | 9 ms |

| | |
|---|--|
| SHORT-CIRCUIT CURRENT RATING (BASIC RATING) | 5 kA, SCCR (UL/CSA) 45 A, max. Fuse, SCCR (UL/CSA) 60 A, max. CB, SCCR (UL/CSA) |
| SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V) | 30 kA, Fuse, SCCR (UL/CSA) 25 A, Class RK5, max. Fuse, SCCR (UL/CSA) |
| SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V) | 25 A, Class RK5, max. Fuse, SCCR (UL/CSA) 30 kA, Fuse, SCCR (UL/CSA) |
| SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V | 35 A gG/gL |
| SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V | 25 A gG/gL |
| SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V | 20 A gG/gL |
| SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V | 20 A gG/gL |
| SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS | 20 A (600V 60Hz 3phase, 347V 60Hz 1phase) 20 A (480V 60Hz 3phase, 277V 60Hz 1phase) |
| SPECIAL PURPOSE RATING OF ELEVATOR CONTROL | 5 HP, 600 V 60 Hz 3-ph, (UL/CSA) 6.1 A, 600 V 60 Hz 3-ph, (UL/CSA) |
| SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY) | 60 A, LRA 600 V 60 Hz 3phase; (CSA) 10 A, FLA 600 V 60 Hz 3phase; (CSA) 10 A, FLA 480 V 60 Hz 3phase; (CSA) 60 A, LRA 480 V 60 Hz 3phase; (CSA) |
| SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING | 20 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) 20 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA) |
| SPECIAL PURPOSE RATING OF TUNGSTEN | 14 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, |

| | |
|--|--|
| INCANDESCENT LAMPS | (UL/CSA) 14 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) |
| CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN) | 22 A |
| CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN) | 21 A |
| CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN) | 20 A |
| RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ | 7.5 kW |
| RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ | 7 kW |
| RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ | 6.5 kW |
| ACTUATING VOLTAGE | 380 V 50 Hz, 440 V 60 Hz |
| ALTITUDE | Max. 2000 m |
| OPERATING VOLTAGE AT AC, 50 HZ - MIN | 24 V |
| OPERATING VOLTAGE AT AC, 50 HZ - MAX | 690 V |
| OPERATING VOLTAGE AT AC, 60 HZ - MIN | 24 V |
| OPERATING VOLTAGE AT AC, 60 HZ - MAX | 690 V |

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



Eaton Corporation plc

Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

© 2025 Eaton. All Rights Reserved.

Follow us on social media to get the latest product and support information.

